MITIGATION MONITORTING AND REPORTING PLAN

For the Hamilton Wetland Restoration Project Supplemental Environmental Impact Report Bel Marin Keys Unit V Expansion April 2003

Prepared by the State Coastal Conservancy June 2005

PURPOSE OF THIS DOCUMENT

This document was prepared to accompany the findings for the Supplemental Environmental Impact Statement and Report for the Bel Marin Keys Unit V Expansion of the Hamilton Wetland Restoration Project. The purpose of this document is to comply with the California Environmental Quality Act (CEQA) provision for mitigation as codified in Public Resources Code 21081.6. The purposes of the Plan is to ensure that measures adopted to mitigate or avoid significant impacts are implemented. Mitigation measures are identified for those impacts determined to be significant. Impacts that do not require mitigation are not addressed in this document.

BACKGROUND

The purpose of the SEIR was to analyze the impacts of expanding the existing Hamilton wetland project to include the 1600-acre Bel Marin Keys Unit V property, a more than doubling of acreage for the project. The proposed wetland restoration closely follows the proposal for the Hamilton wetland project, as described in the 1998 EIS/R, jointly prepared by the Conservancy and U.S. Army Corps of Engineers. Slight changes and updates exist in the SEIR that apply to the entire project, for example the original EIR considered only an electric offloader whereas the SEIR considers both diesel and electric offloaders. Additionally, since the original project EIR, there have been changes made to CEQA and its Guidelines, which are reflected in the newer document. In addition, the Conservancy undertook a comprehensive public involvement and stakeholder process during the drafting of the SEIR and this public involvement has helped further shape the overall Hamilton project.

The purpose of this Mitigation Monitoring and Reporting Plan (Plan) is to ensure that the proposed mitigation measures are implemented. (CEQA Guidelines, Sec15097). These requirements apply to all public agencies and the lead agency has the option of either *monitoring* the mitigation or *reporting* on the mitigation, or carrying out both. The SEIR also contains a draft Adaptive Management and Monitoring Plan, (Appendix K), which will overlap considerably with this plan. However, the draft plan as contained in the SEIR has not been finalized and would be implemented by the Corps of Engineers after completion of the permitting process, not contemplated until fall of 2005.

Because the Hamilton project will most likely carryout a variety of broad and long term monitoring, the Conservancy proposes to *report* on the mitigation rather than monitor it in this Plan. The project monitoring will likely be a consequence of post-construction management as well permit conditions issued by the Regional Water Quality Control Board, Bay Conservation and Development Commission and US Fish and Wildlife Service via its endangered species authority. Staff is of the opinion that the public is better served if the Conservancy prepares annual reports on the progress of mitigation

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implementation and monitoring, rather than attempting to carryout the monitoring itself. This is, in part, because the lead agency for implementing the project is the Corps of Engineers and much of this work is actually a "project cost", which is shared between the two agencies.

Additionally, this approach is recommended because many of the mitigation monitoring tasks are likely to be highly technical and therefore contracted out for completion. For example, it is likely that the project will need to monitor various forms of mercury contamination in the project sediments, both during and after construction of the project. The monitoring will involve the latest scientific methods and will boarder on research. It would be better for the Corps to have this monitoring carried out by in-house scientists or government contractors and the Conservancy will be responsible to report the findings to the public, rather than have staff attempt to implement the mercury studies program.

IMPACTS

This reporting plan is broken into two parts, first a list of impacts for which the project SEIR found there are significant impacts that <u>can be mitigated</u> to a level of insignificance. Secondly, a table for the three impacts for which the SEIR found that <u>no way to mitigate</u> the impact to a level below significant.

The tables show the expected implantation timeframes for each mitigation. Because the project contains many phases, some mitigation measures will not be carried out for a number of years. For example post-breach monitoring will not occur until the site has been filled with sediment, which is expected to take as much as five years from the commencement of pumping. Since the first loads of sediment will not be pumped onto the property until early calendar year 2006, the post-breach monitoring would not occur until at least 2011. This highlights the reason why a reporting plan is a preferable means of CEQA compliance: it is not possible to define entire project monitoring at this point in time. Rather the monitoring program will be built in the coming months, subject to regulatory agency approval, and is expected to be open to modification over the coming decade.

SUMMARY

A review of the SEIR shows that for the Preferred Alternative 2, only three outcomes were assessed as not lending to a form of mitigation. Of the dozens of other potential impacts, nearly all can be reduced to a level of less-than-significant with changes to the project or the addition of monitoring and coordination. The table below contains all impacts that were found to be significant and indicates how they can avoided by selecting the preferred alternative or mitigated by minor changes to the project design and implementation.

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Impact			Significance with Mitiga Incorporati		Party Responsible for Mitigation	Timeframe	
Surface Water Hydrology and Tidal Hydraulics							
Impacts and Mitigation Measures Common to Alternatives 1-3 Impacts	Less than Significant or Beneficial except:						
Impact TH-2: Changes in Circulation and Morphologic Evolution in Existing Tidal Wetlands	Significant	Mitigation Measure BIO-7: Development and Implement Increase the Rate of Marsh Development, if Required		Less than Significant	HWRP (COE/SCC) will undertake Monitoring and Adaptive Management Plan (MAMP) which will survey channel configuration and evolution	After Breach 2013	
Impact TH-6: Excessive or Unexpected Erosion of Perimeter Levees	Less than Significant						
Impacts and Mitigation Measures Unique to Alternative 3		No. of a Marsana Till I. I		V 41	This is not the preferred alternative. However, HWRP	Fall 2005-Summer 2006	
Impact TH-11: Modification to Sedimentation Processes in San Pablo Bay	Significant	Mitigation Measure TH-1: P Assessment of Modifications Sedimentation Processes in S Bay for Alternative 3 and Im Phased Tidal Cell Development Necessary	to San Pablo plement	Less than Significant	will undertake circulation studies as a part of the Aquatic Transfer Facility (ATF) which may address this issue.		
Water Quality							
Impacts and Mitigation Measures Common to Alternatives 1-3					HWRP (COE/SCC) will undertake Methylmercuary	Monitoring plan will likely be a per requirement by RWQCB an/. A d	
Impact WQ-1: Potential for Degradation of Surface Water and Sediment Quality due to Increased Methylmercury Formation Potential	Potentially Significant and Unavoidable	Mitigation Measu Implement Methy Adaptive Manage	Imercury Significant		Monitoring and Adaptive Management Plan.	would be submitted for approval i Monitoring for methylmercury is	
Impact WQ-6: Potential Diesel Pump Spills into San Pablo Bay	Significant	Mitigation Measu Provide for Spill I Offloader and at E Pump Facility	Protection at	Less than Significant			

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Impact	Significance Determin	Mitigation tion Measure	Significance with Mitiga Incorporati		Party Responsible for Mitigation	Timeframe
Impact WQ-8: Potential Changes to Circulation in Pacheco Pond	Significant	Mitigation Me Incorporate Pa Water Quality Regarding Cir Water Manage Cooperation w MCFCWCD a	checo Pond Concerns culation in New ement Plan, in vith	Less than Significant		
Impacts and Mitigation Measures Common to Alternative 1 and Revised 2						
Impact WQ-9: Potential for Degradation of Receiving Water Quality due to Dredged Material Placement	Significant	Mitigation Me Develop and I Water Quality Program for D Material Place	mplement Monitoring Predged	Less than Significant		
Impacts Unique to Alternative 3						
Impact WQ-10: Potential for Spills from Fueling of Pump(s) at Pump Station	Significant	Mitigation Me Provide for Sp Pump Station.	oill Protection at	Less than Significant		
ublic Health						
Impacts and Mitigation Measures Common to Alternatives 1-3						
Impact PH-1. Increase of Potential Mosquito Breeding Habitat	Significant	Mitigation Me Coordinate Re Design and Ex Activities with	estoration apansion	Less than Significant		
Biological Resources						
No-Action Alternative	No impact					
Impact BIO-3: Temporary Disturbance to the Northern Harrier, White-Tailed Kite, Golden Eagle, Cooper's Hawk, Sharp-shinned Hawk, Short-Eared Owl, Burrowing Owl, Saltmarsh Common Yellowthroat, and San Pablo Song Sparrow During Construction	L C F S S	itigation Measure BIO-1: Condocate Northern Harrier, White-Tolden Eagle, Cooper's Hawk, Shawk, Short-Eared Owl, Burrowiltmarsh Common Yellowthroating Sparrow Nest Sites Before Citiated and Avoid Breeding Sites	ailed Kite, narp-shinned ng Owl, , and San Pablo Construction Is	Less than Significant		

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npact	Significance Deter	mination	Mitigation Measure	Significance with Mitiga Incorporati		Party Responsible for Mitigation	Timeframe
Impact BIO-4: Potential for Construction-Related Mortality of Salt Marsh Harvest Mice	Significant	Harvest Mouse	asure BIO-2: Remove Habitat and Place I	Barrier	Less than Significant		
Impact BIO-5: Potential for Construction-Related Mortality of California Clapper Rails and California Black Rails	Significant	Equipment with Coastal Marsh	asure BIO-3: Avoid hin 250 feet of the C During the Breeding oper Rail and Califor	utboard Tidal Period of the	Less than Significant		
Impact BIO-6: Potential for Mortality of San Pablo Song Sparrows	Significant	Locate San Pat	asure BIO-4: Condu olo Song Sparrow No s Initiated and Avoid	est Sites before	Less than Significant		
Impact BIO-7: Potential for Mortality of Burrowing Owls	Significant	Locate Burrow	asure BIO-5: Conduing Owl Nest Sites be Initiated and Avoid	efore	Less than Significant		
Impact BIO-8: Potential for Construction-Related Mortality of Outmigrating Salmonid Smolts	Significant	that Could Affe	asure BIO-6: Avoid ect Tidal Aquatic Ha lts Could Be Present	bitats when	Less than Significant		
Impact BIO-10: Potential Disturbance to or Mortality of Special-Status Species Resulting from Monitoring and Adaptive Management Activities	Significant	Implement a Ro Adaptive Mana	asure BIO-7: Development Development Program Dential Impacts on Spe	g and signed to	Less than Significant		
Impact BIO-14: Loss of Coastal Salt Marsh	Significant	Development a	asure BIO-8: Monitor and Implement Actions rsh Development, If	ns to Increase	Less than Significant		
Impact BIO-15: Loss of Brackish Open Water Habitat and Brackish Marsh	Significant	Development of	asure BIO-9: Monito of Brackish Open Wa Seasonal Wetlands.		Less than Significant		
Impact BIO-19: Loss of Habitat for California Clapper Rail, California Black Rail, Salt Marsh Harvest Mouse, and Saltmarsh Common Yellowthroat	Significant	Development a	asure BIO-8: Monitor and Implement Actionsh Development, if	ns to Increase	Less than Significant		

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npact	Significance Deter	ermination	Mitigation Measure	Significanc with Mitiga Incorporat		Party Responsible for Mitigation	Timeframe
Impact BIO-20: Temporary Loss of Nesting Habitat for the San Pablo Song Sparrow	Significant	Developmenthe Rate of I Mitigation M Development	Measure BIO-8: Monit ent and Implement Action Marsh Development, if Measure BIO-9: Monit ent of Brackish Open W //or Seasonal Wetlands.	ions to Increase if Required itor Vater, Emergent	Less than Significant		
Impact BIO-25: Potential for spread of invasive nonnative plants within and outside of restoration area during construction activities	Significant	Perennial Pe to Uninfeste Mitigation M	Measure 10b: Monitor Control for Infestation by	Invasive Weeds	Less than Significant		
Impact BIO-27: Disruption of Sensitive Wildlife due to Bay Trail Construction, All Alternatives	Significant	Mitigation M Locate North Golden Eagh Hawk, Shorth Saltmarsh C Song Sparro	Measure BIO-1: Conductor Harrier, White-Tagle, Cooper's Hawk, Short-Eared Owl, Burrowir Common Yellowthroat, row Nest Sites Before Cond Avoid Breeding Sites	Cailed Kite, harp-shinned ing Owl, and San Pablo Construction Is	Less than Significant		
Impact BIO-28: Disruption of Sensitive Wildlife due to Public Access Interactions along the Bay Trail	Significant	Wildlife-Sei	Measure BIO-11: Inco ensitive Approaches in I I Develop Trail Access	Bay Trail	Less than Significant		
Impact BIO-29: Disruption of Sensitive Wildlife due to Public Access Interactions along the Bay Trail, Southward and Northward Extension	Significant	Design and I Southward I	Measure BIO-12: Impl I Management Mitigatio Extension and Northwa of Novato Levee	on for Bay Trail	Less than Significant		
Impact BIO-31: Potential Harm to Marine Mammals, and Special-Status Fish Species, and Common Fish Species due to Pile-Driving Activities for Off-Loader Facility and Booster- Pump Platforms	Significant and Unavoidable	Appropriate Reduce Imp	Measure BIO-13: Coor e Federal and State Age pact on Marine Mamma Species during Pile-Dr	encies to als and Special-	Significant		
Impact BIO-32: Potential Disruption to Nesting Special-Status and Common Birds due to Removal of Several Eucalyptus Groves and Several Oak Trees	Significant	Eucalyptus (Measure BIO-14: Rem Groves and Oak Trees atus and Other Bird Bree	s outside	Less than Significant		

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Impact	Significance Determ	nination	Mitigation Measure	Significance with Mitiga Incorporati		Party Responsible for Mitigation	Timeframe
Impact BIO-33: Potential Disruption to Special- Status Bat Species due to Removal of Structures	Significant	Surveys for Presen	re BIO-15: Conduction of Special-Statu ove Structures in acceleral Laws.	s Bat	Less than Significant		
Impacts and Mitigation Measures Common to Alternative 1 and Revised Alternative2 Impact BIO-36: Potential Effects of Construction of and Access to the Interpretive Center and Access Area on the "Bulge" Parcel West of the HWRP	Significant	Mitigation Measur Access to and from	re BIO-16: Recomm res for Construction in the Interpretive C e "bulge" parcel we	of and enter and	Less than Significant		
Impact BIO-38: Temporary Disturbance of Fish in San Pablo Bay During Construction	Significant		re BIO-17: Use Fish Entrainment of Fish	Screens to	Less than Significant		

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pact	Significance Deter	rmination	Mitigation Measure	Significar with Miti Incorpora	9	Party Responsible for Mitigation	Timeframe
Impacts and Mitigation Measures Unique to Alternative 1							
Impact BIO-39: Disruption of Sensitive Wildlife due to Bay Trail Construction, Alternative 1 and	Significant	_	sure BIO-18: Mitig Trail West of Pach		Less than Significant		
Spur Option 1A		Locate Northern Golden Eagle, (Hawk, Short-Ea Saltmarsh Com Song Sparrow !	sure BIO-1: Condun Harrier, White-Ta Cooper's Hawk, Shared Owl, Burrowin mon Yellowthroat, Nest Sites Before Covoid Breeding Sites	iled Kite, arp-shinned g Owl, and San Pablo onstruction Is			
		Equipment with	sure BIO-3: Avoid ain 250 feet of the C	utboard Tidal			

Coastal Marsh During the Breeding Period of the California Clapper Rail and California Black Rail and Avoid Breeding Sites during Construction Mitigation Measure BIO-5: Conduct Surveys to Locate Burrowing Owl Nest Sites before Construction Is Initiated and Avoid Breeding Sites during Construction

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Impact	Significance Detern	nination	Mitigation Measure	Significance with Mitiga Incorporati		Party Responsible for Mitigation	Timeframe
Impact BIO-40: Disruption of Sensitive Wildlife due to Public Access Interactions along Bay Trail, Alternative 1	Significant	Mitigation Measur and Management I Alternative 1			Less than Significant		
		Mitigation Measur and Management					
		Mitigation Measur Design and Manag Southward Extens from City of Nova	gement Mitigation ion and Northward	for Bay Trail			
Impacts and Mitigation Measures Unique to Revised Alternative 2							
Impact BIO-41: Disruption of Sensitive Wildlife due to Bay Trail Construction, Revised Alternative 2	Significant	Mitigation Measur Locate Northern F Golden Eagle, Coo Hawk, Short-Eare Saltmarsh Commo Song Sparrow Nes Initiated and Avoi Construction	Iarrier, White-Tail oper's Hawk, Shar ed Owl, Burrowing on Yellowthroat, an et Sites Before Con	ed Kite, p-shinned g Owl, nd San Pablo nstruction Is	Less than Significant		
		Mitigation Measur Equipment within Coastal Marsh Du California Clapper and Avoid Breedin	250 feet of the Ouring the Breeding Rail and Californ	tboard Tidal Period of the ia Black Rail			
		Mitigation Measur Locate San Pablo Construction Is In Sites during Const	Song Sparrow Nes	st Sites before			
		Mitigation Measur Locate Burrowing Construction Is In: Sites during Const	Owl Nest Sites be itiated and Avoid	efore			
		Mitigation Measur that Could Affect Salmonid Smolts O	Tidal Aquatic Hab	Construction itats when			
Impact BIO-42: Disruption of Sensitive Wildlife due to Bay Trail Access, Revised Alternative 2	Significant	Mitigation Measur Design and Manag Southward Extens from City of Nova	gement Mitigation ion and Northward	for Bay Trail	Less than Significant		
		Mitigation Measur Design and Manag Bay Trail Revised	gement Recommer				

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			Mitigation	Significance Determine with Mitigation	nation	Party Responsible for	
Impact	Significance Determine	nation	Measure	Incorporation		Mitigation	Timeframe
Impacts and Mitigation Measures Unique to Alternative 3							
Impact BIO-43: Disruption of Sensitive Wildlife due to Bay Trail Construction, Alternative 3 and Spur Option 3A		Locate Northern Golden Eagle, Co Hawk, Short-Ear Saltmarsh Comm Song Sparrow No	ure BIO-1: Conduct Harrier, White-Tai poper's Hawk, Sha ed Owl, Burrowing non Yellowthroat, est Sites Before Cooled Breeding Sites	lled Kite, Significa rp-shinned g Owl, and San Pablo onstruction Is			
		Equipment within Coastal Marsh D California Clappe	ure BIO-3: Avoid on 250 feet of the Ouring the Breeding er Rail and Califoring Sites during C	utboard Tidal Period of the nia Black Rail			
		Locate San Pablo	ure BIO-4: Conduct Song Sparrow Neinitiated and Avoid struction	est Sites before			
		Locate Burrowin	ure BIO-5: Conduct g Owl Nest Sites but nitiated and Avoid struction	efore			
		Mitigation Meass that could affect	ure BIO-6: Avoid o tidal aquatic habita	construction tts			
Impact BIO-44: Disruption of Sensitive Wildlife due to Bay Trail Access, Alternative 3 and Spur Option 3A			ure BIO-21a: Spec Mitigation for Ba				
			are BIO-21b: Spect Mitigation for Tra				
		Design and Mana	ure BIO-12: Imple agement Mitigation sion and Northwan ato Levee	n for Bay Trail			

Land Use and Utilities

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Impact	Significance Determin	Mitigation ation Measure	Significance Determination with Mitigation Incorporation	Party Responsible for Mitigation	Timeframe
Impacts and Mitigation Measures Unique to Alternative 3 Impact LU-7. Inconsistency with the LTMS Management Plan	Potentially Significant	No feasible mitigation measures	Potentially Significant	This is not the preferred alternative. However Corps could coordinate with BCDC, USEPA, and RWQCB regarding LTMS implementation in light of other projects in region. Site capacity may not be needed to fulfill the LTMS policy.	BMKV implementation pending V Authorization. This is not the prefe alternative.
Hazardous Substances and Waste					
Impacts and Mitigation Measures Common to Alternatives 1-3 Impact HAZ-1: Potential Exposure of Humans, Plants, or Wildlife to Contaminants as a Result of Remediation Activities for the Proposed Action	Significant	Mitigation Measure HAZ-1: Coordinate with Department of Toxic Substances Control on BMK Site Clean-Up Requirements prior to Construction	Less than Significant		
Impact HAZ-2: Potential Exposure of Humans, Plants, or Wildlife to Hazardous Chemicals Contained in Dredged Material Used as Fill Material	Potentially Significant (See Impact WQ-1)	Mitigation Measures WQ-1: Implement Methylmercury Adaptive Management Plan	Potentially Significant	See above	See above
Impact HAZ-3: Potential Exposure of Humans, Plants, or Wildlife to Hazardous Chemicals Due to Sedimentation from Novato Creek and/or San Pablo Bay	Potentially Significant (See Impact WQ-1)	Mitigation Measures WQ-1: Implement Methylmercury Adaptive Management Plan	Potentially Significant	See above	See above
Air Quality					
Impacts and Mitigation Measures Common to Alternatives 1-3					
Impact A-1: Construction-Related Emissions of PM10 from Terrestrial Construction Equipment	Significant	Mitigation Measure A-1: Control PM10 Emissions in Accordance with BAAQMD Standards	Less than Significant		

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Impact	Significance Determination	Mitigation Measure	Significance Determination with Mitigation Incorporation	Party Responsible for Mitigation	Timeframe
Impact A-2: Construction-Related Emissions of Ozone Precursors from Terrestrial Equipment and Use of Diesel Pumps to Offload Dredge Material	Significant	Mitigation Measure A-2: Control and/or Offset NOx Emissions Associated with Unloading of Dredged Material	Less than Significant		
Noise					
No-Action Alternative No Impact					
Impact N-2: Temporary Increases in Noise Levels to More Than 60 dBA during Onshore Construction	Significant	Mitigation Measure N-1: Employ Noise- Reducing Construction Practices	Less than Significant		
Impacts Unique to Alternative 3					
Impact N-5: Increased Noise from Use of Relief Pump(s)	Significant	Mitigation Measure N-2: Employ Noise- Reducing Design if the Pump Station in Alternative 3 is Built.	Less than Significant		
Cultural Resources					

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Impact	Significance Determination	Mitigation Measure	Significance Determination with Mitigation Incorporation	Party Responsible for Mitigation	Timeframe
Impact CR-2: Potential impacts to buried cultural deposits or human remains	Significant	Mitigation Measure CR-1: Stop Work if Buried Cultural Deposits Are Encountered during Construction Activities Mitigation Measure CR-2: Stop Work if Human Remains are Encountered during Construction	Less than Significant		
Aesthetics					
Impacts and Mitigation Measures Unique to Alternative 1 Impact A-2: Obstruction of Existing Unobstructed Views of BMKV Site and San Pablo Bay, Alternative 1	Significant and Unavoidable	No mitigation measures available, except changes to levee heights and location as in Revised Alternative 2.	Significant	SCC will work with Corps to implement phased levee construction that will allow lower levee heights. Long term of project	Design phase pending WRDA Aut
Impacts and Mitigation Measures Unique to Alternative 3 Impact A-4: Obstruction of Existing Views of BMKV Site and San Pablo Bay	Significant and Unavoidable	No mitigation measures available, except changes to levee heights and location as in Revised Alternative 2.	Significant	This is not the preferred alternative. However the Corps could implement staged construction of levees that obscure views, thereby minimizing and possibly eliminating the impact	